



Dart Aerospace Ltd.  
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Canada

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**RBT18604**  
**Job Sheet 185160**



Part No: RBT18604

Job Qty: 1 ea

Part Name: Tail Rotor Swashplate Bearing ReGrease Tool



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 10/23/18

Job Tracking No:

Due Date: 11/30/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG RBT18604 Rev.5 IPP Rev. A 18.10.10 New issue DP Verify DD

Ship Via:

### Bill of Materials

### Job Routing

| Op No | Operation          | Qty   | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |           | Sign-off    |
|-------|--------------------|-------|------------|----------|-----------|---------|-----------------------|-----------|-------------|
|       |                    |       |            |          | Setup Hrs | Run Hrs | Workcenter / Supplier | Lead Time |             |
| 90    | Start up Operation | 1 Ea  |            | 11/30/18 | 0.00      | 0.00    | Start Up Small Fab-2  |           | MLL         |
| 110   | Small Fab          | 1 pcs |            | 11/30/18 | 0.00      | 1.00    | Small Fab-3           |           | MLL DAS     |
| 120   | QC                 | 1 pcs |            | 11/30/18 | 0.00      | 0.00    | QC5                   |           | 38          |
| 130   | Packaging          | 1 pcs |            | 11/30/18 | 0.00      | 0.00    | Packaging3-1          |           | DEC 11 2018 |
| 140   | QC21-FG            | 1 Ea  |            | 11/30/18 | 0.00      | 0.00    | QC21                  |           | 21          |

Part Op 110 - 1-Assemble as per DWG.

Descriptions: 130 - The tool must be packaged with a desiccant bag into a tight fitting sealed plastic bag as per DWG.

### Job BOM

| Part / Item | Component Name | Quantity    | Operation             | Container |
|-------------|----------------|-------------|-----------------------|-----------|
| 1095K41     | Zerk           | 1 Ea (1 ea) | 90-Start up Operation | 5075-943  |
| 2-230       | O-Ring         | 1 (1 ea)    | 90-Start up Operation | 5122-105  |
| RBT18604-1  | Body           | 1 Ea (1 ea) | 110-Small Fab         | 5122-854  |
| RBT18604-3  | Plug           | 1 Ea (1 ea) | 110-Small Fab         | 5135-457  |

### Job Allocations

| Operation             | Component Part | Required | Inventory | Allocated |
|-----------------------|----------------|----------|-----------|-----------|
| 90-Start up Operation | 1095K41        | 1        | 9         | 0         |
|                       | 2-230          | 1        | 0         | 0         |
| 110-Small Fab         | RBT18604-1     | 1        | 0         | 0         |
|                       | RBT18604-3     | 1        | 0         | 0         |

### Part Specifications



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not be found.

Container No: S136435



Part: RBT18604

Job No: 185160

Serial No/Batch: S136435

Revision: 5

Inspector:

Exp Date:

Instructions:

Date: 12/10/18

Plex 10/23/18 11:13 AM Dart.lajeunesse.marie



DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

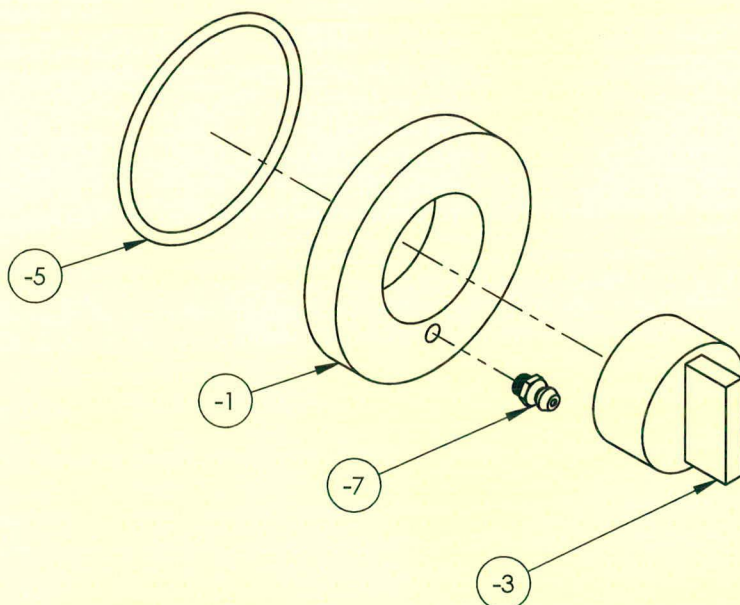
Work Order update only ☐

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                              |  |
| Date : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Step #: _____                                                                                                                                                                      | QTY Effective : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | MRB (QSI042) Approval        |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                    | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | Completed By                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | Lead hand / Supervisor       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | Approval Verification        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | QC / QA Coordinator Approval |  |
| <b>Root Cause</b><br><div style="display: flex; justify-content: space-between;"> <div>           Environment <input type="checkbox"/><br/>           Design <input type="checkbox"/><br/>           Doc/Data <input type="checkbox"/><br/>           Equip/Tooling <input type="checkbox"/><br/>           Handling/Pre <input type="checkbox"/><br/>           Material <input type="checkbox"/><br/>           Internal Transport <input type="checkbox"/><br/>           Tribal Knowledge <input type="checkbox"/><br/>           LOA <input type="checkbox"/><br/>           Substation <input type="checkbox"/><br/>           Past Expiry Date <input type="checkbox"/><br/>           Misidentified <input type="checkbox"/> </div> <div>           No Re-verification <input type="checkbox"/><br/>           Operator <input type="checkbox"/><br/>           Offset/Setup <input type="checkbox"/><br/>           Supplier <input type="checkbox"/><br/>           Training <input type="checkbox"/><br/>           Use for Testing <input type="checkbox"/><br/>           Poor Information <input type="checkbox"/><br/>           Rushing <input type="checkbox"/><br/>           Product Improvement <input type="checkbox"/><br/>           Process Improvement <input type="checkbox"/><br/>           Manufacturing Process <input type="checkbox"/><br/>           Past Due <input type="checkbox"/> </div> </div> |                                                                                                                                                                                    | <b>FAULT CATEGORY</b><br><div style="display: flex; justify-content: space-between;"> <div>           Pressure/Forced <input type="checkbox"/><br/>           Bending <input type="checkbox"/><br/>           Centre Not Concentric <input type="checkbox"/><br/>           Cracks <input type="checkbox"/><br/>           Crimp/Kink/Ripple/Wave <input type="checkbox"/><br/>           Cuffs <input type="checkbox"/><br/>           Crushing <input type="checkbox"/><br/>           Heat Treat <input type="checkbox"/><br/>           Wave/Twist in Tube <input type="checkbox"/><br/>           Marks/Chatter <input type="checkbox"/> </div> <div>           Temperature/Cure <input type="checkbox"/><br/>           Set-up <input type="checkbox"/><br/>           BOM/Route <input type="checkbox"/><br/>           Broken/Damage/Defect <input type="checkbox"/><br/>           Inspection Incomplete/Unqualified <input type="checkbox"/><br/>           Contamination <input type="checkbox"/><br/>           Countersink <input type="checkbox"/><br/>           Cut Too Short <input type="checkbox"/><br/>           Instructions Incomplete/Unclear <input type="checkbox"/><br/>           Drill Holes <input type="checkbox"/> </div> <div>           Power Loss/Surge <input type="checkbox"/><br/>           Folio/Program <input type="checkbox"/><br/>           Grain <input type="checkbox"/><br/>           Weld <input type="checkbox"/><br/>           Wrong Stock Pulled <input type="checkbox"/><br/>           Out of Sequence <input type="checkbox"/><br/>           Off-set <input type="checkbox"/><br/>           Misabeled <input type="checkbox"/><br/>           Fit/Function <input type="checkbox"/><br/>           Misaligned/off center <input type="checkbox"/> </div> <div>           Positioned Wrong <input type="checkbox"/><br/>           Outside Dimensions <input type="checkbox"/><br/>           Over/Under tolerance <input type="checkbox"/><br/>           Part Incorrect <input type="checkbox"/><br/>           Part Lost/Missing <input type="checkbox"/><br/>           Part Moved <input type="checkbox"/><br/>           Drawing <input type="checkbox"/><br/>           Finish <input type="checkbox"/><br/>           Misread <input type="checkbox"/><br/>           Turning Sequence <input type="checkbox"/> </div> </div> |  |                              |  |
| OTHER : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                              |  |



This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

| REVISIONS |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |            |         |          |
|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------|----------|
| REV       | ECR     | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DATE       | INITIAL | APPROVED |
| 1         |         | DISTANCE FROM FACE TO STEP INCREASED TO .30 TO ENSURE ADEQUATE THREAD ENGAGEMENT.                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 3/9/2001   |         |          |
| 2         |         | O-RING GROOVE ENLARGED TO BETTER FIT O-RING.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 3/23/2001  | DW      |          |
| 3         |         | DISTANCE FROM FACE TO STEP REDUCED TO .265.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 4/4/2001   |         |          |
| 4         |         | GREASE FITTING CH'D TO 45° FOR EASE OF USE, MUST FACE OUT.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2/10/2003  |         |          |
| 4A        |         | CH'D TITLEBLOCK & REVISION BLOCK, CH'D REVISIONS FROM ALPHABETICAL TO NUMERICAL, -1 CH'D ENGRAVE NOTE, LABELED SECTION VIEW.                                                                                                                                                                                                                                                                                                                                                                                                                              | 1/13/2010  | RJC     |          |
| 5         | 16-0202 | -1 CH'D DIM WAS Ø3.00 CLEANUP IS Ø3.00 ±.02, WAS Ø.09 THRU [ ] Ø.213 ±1/4, 1/4-28 UNF FOR GREASE FITTING IS Ø.09 THRU ALL 1/4-28 -28 ±.25, WAS BORE Ø1.505 +.012/- .000 & THREAD 1.563-18 UNJS -3B PER MIL 8879 IS 1.563-18 UNJS-3B THRU ALL. -3 DELETED DIM .63, ADDED DIM'S 1.38, .65, .13, CH'D MATERIAL WAS NYLON OR DELRIN IS WHITE DELRIN/ACETAL. -5 CH'D B/O INFO WAS PARKER #2-230 IS Ø1/8 X C.S. X Ø2-1/2 I.D. X Ø2.75 (#2-230) CHRISTOPHER SEALS), MAT'L IS BUNA-N. -7 CH'D B/O INFO WAS MSC #08060725 OR EQUIVALENT IS MCMASTER-CARR #1095K41. | 10/24/2016 | RJC     | JAG      |



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WORK ORDER  
NO. 185160MLJ

18-1024

|                                             |                                                                                                                                             |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DART<br/>AEROSPACE</b>                   |                                                                                                                                             |
| TITLE<br><b>REGREASE TOOL - SWASH PLATE</b> |                                                                                                                                             |
| DWG NO.<br><b>RBT18604</b>                  | REV<br><b>5</b>                                                                                                                             |
| MAT'L<br>HEAT TREAT<br>FINISH<br>SPEC       | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>.XXX ± .005 FRACTIONS ± 1/8<br>.XX ± .01 ANGLES ± .5°<br>.X ± .1 SURFACES = 125/✓ |
| DRAWN BY: <b>CLOUGH</b>                     | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R                                                                                             |
| CHECKED: <b>DUERFELDT</b>                   | 2. DIMENSIONAL LIMITS APPLY AFTER PLATING                                                                                                   |
| OPPS APPR: <b>ANDERSON</b>                  | 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009                                                                                               |
| QA APPR: <b>LINDSAY</b>                     | USED ON MODEL                                                                                                                               |
| APPROVED: <b>GILBERT</b>                    | MD 369 D, E, & F                                                                                                                            |
| SCALE <b>1:2</b>                            | DATE <b>10/24/2016</b> SHEET <b>1 OF 3</b>                                                                                                  |

| ASSY QTY | ASSY QTY | B/O | Part # | UNIT QTY | Description    | Material            | B/O INFORMATION OR SPECIFICATIONS                            | PG. |
|----------|----------|-----|--------|----------|----------------|---------------------|--------------------------------------------------------------|-----|
|          |          |     | -1     | 1        | BODY           | 6061                |                                                              | 2   |
|          |          |     | -3     | 1        | PLUG           | WHITE DELRIN/ACETAL |                                                              | 3   |
|          |          | B/O | -5     | 1        | O-RING         | BUNA-N              | Ø1/8 C.S. X Ø2-1/2 I.D. X Ø2.75 (#2-230) (CHRISTOPHER SEALS) | 1   |
|          |          | B/O | -7     | 1        | GREASE FITTING | STEEL               | STRAIGHT 1/4 -28 SAE-LT MALE (MCMASTER-CARR #1095K41)        | 1   |

